

SPACE CENTER Roundup

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Genesis team comes clean



NASA JSC 2002e24040 Photo by Robert Markowitz

Ron Bastien, left, and Carol Schwarz inspect a translucent array in Johnson Space Center's Genesis Mission cleanroom. Prior to launching the Genesis spacecraft, the JSC Mission Team had to assemble ultraclean arrays from individual solar wind collectors. Each of the five arrays were completely assembled without ever being touched by bare human hands. In order to achieve this, special instruments had to be created to handle the arrays' delicate wafers, which are less than 1 mm thick. In addition, hundreds of tiny screws had to be individually washed with ultrapure water using gloves and tweezers prior to being used to construct the arrays. TO LEARN MORE ABOUT THE ULTIMATELY CLEAN MISSION, SEE PAGES 4-5.

Introducing IFMP

By Randy Stone, Deputy Center Director



In April, I sent an e-mail asking a large portion of the Johnson Space Center community to complete the Integrated Financial Management Program (IFMP) Survey. The purpose of the survey was to gather information around the risks and barriers we face as we roll out IFMP at JSC.

I'm happy to report that JSC had a 47 percent response – an outstanding turnout. The survey team is currently developing a plan to communicate the high-level survey results to everyone at JSC.

The results show that while the JSC community understands the need for improved financial and data management tools and processes, they do not know the specifics about IFMP. To begin addressing this, I've included an overview below. Over the next several months, the JSC IFMP team will provide detailed information about the program and its various projects.

WHAT IS IFMP?

IFMP is an agency-wide initiative to modernize NASA's outdated financial and administrative systems and processes. It will introduce a series of new, integrated software systems and business processes that will improve employee productivity and operations efficiency, as well as the Agency's fiscal accountability. The specific business goals of IFMP are to:

- ◆ Provide timely, consistent and reliable information for management decisions
- ◆ Improve NASA's accountability and enable full cost management
- ◆ Achieve efficiencies and operate effectively
- ◆ Exchange information with customers and stakeholders
- ◆ Attract and retain a world-class workforce

Additionally, IFMP will help JSC and NASA meet the goals outlined in the President's Management Agenda.

Two IFMP projects – NASA STARS and the Electronic Travel Manager Web Upgrade – have already been successfully implemented at JSC. Two others – Core Financial (the Program's "backbone," which includes accounting and purchasing functionalities) and Position Description Management – are currently under way here.

Other projects – Budget Formulation, Core Human Resources, Asset Management and Procurement – are planned for rollout by the end of 2005.

WHAT IS OUR IMPLEMENTATION APPROACH?

Our implementation approach is based on research of other successful software implementations, NASA requirements and previous experience. From these considerations, the program has made specific decisions to ensure success.

First: IFMP has a separate implementation schedule and pilot test for each project (rather than a riskier, all-at-once implementation).

Second: IFMP has selected proven vendors for the Core Financial project. The chosen software is SAP (pronounced "S-A-P"), an established company whose product has a successful track record in both private and public organizations (including Microsoft, Chevron, Lockheed Martin, the U.S. Navy and the Houston Independent School District). To assist with the implementation, we have partnered with Accenture, a consulting firm that has implemented SAP at hundreds of sites.

Third: The program has involvement at all levels across the Agency and centers to ensure acceptance of the new business processes. These, and other factors, will help us achieve success in our implementation of the program.

HOW WILL IFMP IMPACT YOU?

IFMP will impact every employee at JSC in some way. You will benefit from IFMP if you currently initiate purchase requests, manage a project or a budget, hire employees, travel for your job or hold a JSC purchase card, among other functions.

IFMP users will enjoy:

- ◆ Single points of data entry (eliminating rework and errors from re-keying the same data)
- ◆ Web-based electronic forms
- ◆ Access to real-time data
- ◆ Improved quality and completeness of program and project information
- ◆ A central database from which to access financial information
- ◆ Easier exchange of information between functions and centers

WHAT'S NEXT?

As we move into the future, we may be changing business processes, organizational relationships, policies and procedures. As we get closer to the "Go Live" dates of individual projects, the IFMP team will provide more information about the changes you can expect and the training and support that will be provided.

IFMP is a top priority of Administrator Sean O'Keefe and our Center Director, Lt. Gen. Jefferson Davis Howell, Jr. I ask that you be alert to future IFMP communications and keep an open mind as we proceed with the rollout. The success of IFMP is critical to the future mission success of JSC and NASA. While there will be some challenges, I look forward to achieving the IFMP vision with all of you.

For more information on IFMP here at JSC, visit the following Web site:
<http://www4.jsc.nasa.gov/la/cfo/ifm/>

Center Director Message



KEEP THE STAR!

When I became the Director of JSC, I challenged everyone to pursue professional excellence. Professional excellence is a hallmark of NASA and JSC. We owe it to those whom have gone before us, to ourselves and to the Nation to be top professionals in all that we do.

Top professionals do things correctly and therefore safely. We can't claim to be professionals if mishaps and injuries are a common occurrence at our Center.

I am happy to say that we currently have an excellent safety record. However, there is room for improvement. We should never be satisfied until we eliminate all mishaps and corresponding injuries. The goal of having zero mishaps is both worthy and achievable.

I believe that the Voluntary Protection Program (VPP) provides us useful tools to use for enhancing our personal and team safety posture. Our record since becoming involved in VPP proves its effectiveness. It is advantageous to us to utilize VPP to its fullest extent as we go forward.

I want everyone to aggressively review and implement our VPP principles and guidelines. Let's keep the VPP flag flying on our flagpole. It is a powerful signal for all to see that top professionals work at JSC.

Beak sends....

FROM THE DESK OF LT. GEN. JEFFERSON D. HOWELL, JR.

TOMMY HOLLOWAY, SPACE STATION PROGRAM MANAGER, RETIRES



Tommy Holloway, Manager of the International Space Station Program Office at Johnson Space Center, retired July 3. Holloway's deputy, William H. Gerstenmaier, has taken over as program manager.

"Bill and Tommy have worked side-by-side for years on a variety of projects, so I expect this to be a smooth and seamless transition," said

Frederick D. Gregory, Associate Administrator for Space Flight at NASA Headquarters in Washington.

Holloway was named Space Station Manager in April 1999 after serving as manager of the Space Shuttle Program for nearly four years. He began his career with NASA in 1963, planning activities for Gemini and Apollo flights at what was then known as the Manned Spacecraft Center. He was a flight director in Mission Control for early space shuttle flights and became chief of the office in 1985.

In 1989, he was named assistant director for the Space Shuttle Program for the Mission Operations Directorate. He served as Deputy Manager for Program Integration with the Space Shuttle Program and Director of the Phase I Program of Shuttle-Mir dockings before being named Space Shuttle Program Manager in August 1995.

In the next issue of the *Roundup*, we will take a look at Holloway's extensive contributions to the space program.

Your guide to VPP reassessment

From the JSC Safety Action Committee



VPP affects every person at Johnson Space Center. As the Center Director said on Page 2, "Our record since becoming involved in VPP proves its effectiveness. It is advantageous to us to utilize VPP to its fullest extent as we go forward."

Below is an easy-to-use guide to vital VPP information each employee needs to know. Please take time to review and learn all the material. If you do not have access to the Internet links provided, ask your supervisor for copies of the online material.

For more information about the online information, contact Elmer Johnson at x32084. For questions regarding JSC's participation in the VPP reassessment, contact Amy Kennedy-Reynolds, JSC Safety Action Team chairperson, at x38643.

What is VPP?

Created by the Occupational Safety and Health Administration (OSHA), the Voluntary Protection Program (VPP) is a cooperative program between employees, unions, management and OSHA to achieve a safer, healthier work environment beyond the requirements of OSHA standard.

How does VPP apply to JSC?

OSHA will be at Johnson Space Center July 29 through Aug. 2 to reassess the Center's Safety and Total Health Program. VPP isn't a one-time evaluation; instead, it involves a reassessment every three to four years. JSC must not only maintain but also improve the Center's excellence in safety and health.

OSHA evaluates JSC's Safety and Total Health Program to see if it meets certain criteria. JSC is already a Star site, earning that honor in 1999. As a Star site, the Center enjoys the prestige of being recognized for an excellent Safety and Total Health Program. At JSC, VPP is more than recognition; safety and health must be a way of life.

JSC's slogan, "Star...Because We Care," means that Safety and Total Health is a core value here. To help prevent injuries, the VPP criteria have been incorporated into JSC's own Safety and Total Health Program. To maintain a successful program:

- ☆ Employees and management must work together to ensure a safe and healthy workplace for all employees.
- ☆ You must take responsibility for your safety and health and for the safety and health of your coworkers.
- ☆ Management must support you in making JSC a safe and healthy place to work.

What do all employees need to know?

During the reassessment, you may be called for a formal interview or an evaluator may approach you for an informal "on-the-spot" interview.

To help you prepare, we have posted the following on the Safety and Total Health Homepage (<http://www4.jsc.nasa.gov/safety/index.htm>):

- ☆ A list of things you should know:
<http://www4.jsc.nasa.gov/safety/VPPIInfo/20ThingsKnow.pdf>
- ☆ A list of possible interview questions for employees:
<http://www4.jsc.nasa.gov/safety/VPPIInfo/vppquestions.doc>
- ☆ JSC's Safety Policy:
http://www4.jsc.nasa.gov/safety/JSC_Safety_Policy/
- ☆ How to report a hazard:
<http://www4.jsc.nasa.gov/safety/R&RHazards/Stopit.htm>

To make sure you are ready, we suggest you review each of these Web sites a few times before the end of the month. If you do not have access to this information, ask your supervisor for copies.

What do managers need to know?

A major element of VPP is management commitment. Though all employees are responsible for safety and total health, a greater responsibility rests with you.

- ☆ You must first set the example and then make sure your employees work safely.
- ☆ Safety must be one of your core values.
- ☆ The concern shouldn't be get the job done, but get the job done safely.

Your basic responsibilities under each major element of the program are:

- ☆ **Management leadership and employee involvement:** Get the entire team involved – employees and management, civil servants and contractors. Demonstrate and communicate your commitment, hold the team accountable and consider safety and total health in planning. Your employees should be the "energy" behind safety and total health in your organization.
- ☆ **Worksite analysis:** Find the hazards through analysis, inspections and investigations. Your employees should be able to report hazards without fear of reprisal. Make sure all mishaps and close calls are investigated and appropriate action taken.
- ☆ **Hazard prevention and control:** Eliminate all the hazards you can. Control the rest through engineering and administrative controls, personal protective equipment (PPE), hazard control programs, emergency plans and appropriate discipline. Make sure identified hazards are posted, eliminated/controlled and tracked to closure.
- ☆ **Safety and total health training:** JSC's goal is to train and equip employees, supervisors and managers to work safely. This includes safety training, emergency training and PPE training.

A checklist of what managers should be doing regularly can be found at:

http://www4.jsc.nasa.gov/safety/VPP/MgrChecklistRev0_2002_0321.doc

A list of possible interview questions for supervisors can be found at:

<http://www4.jsc.nasa.gov/safety/VPPIInfo/vppmanques.htm>

Because We Care

Genesis team comes clean

Story by Linda Singleton

Imagine a room so clean that it would pass even the toughest white-glove test that any grandma could give it. Even more so, it would have no dust, airborne particles or organic matter visible to the naked eye.

Besides being an allergy sufferer's dream come true, such a room is now a reality for the JSC Genesis Mission Team that resides in Building 31-N. This group of dedicated professionals has been working diligently for the past four years to renovate and prepare cleanroom facilities in order to receive the Genesis spacecraft and curate the samples it retrieves.

The Mission

Known officially as the Genesis Discovery Mission, the purpose of this \$240 million operation is to send solar wind "collectors" made of ultrapure, ultraclean materials outside of the influence of the Earth's magnetosphere. While in orbit 1.5 million kilometers above Earth, the Genesis spacecraft will collect a representative sample of the solar wind and then return that sample for analysis.

"The mission team – comprised of staff from Lockheed Martin, the Jet Propulsion Lab and JSC – hopes the solar wind samples will help them gain a better understanding of the origin and development of our solar system," said Eileen Stansbery, NASA/JSC team lead. "This information will provide a better understanding of how humans fit into the universe and help to answer questions about how the solar system is evolving and why planets differ from one another."

The spacecraft transporting the sample collectors was launched in August 2001 via a Delta 2 rocket from Kennedy Space Center. It is expected to return to Earth August 2004 in Utah. When the spacecraft returns, the Genesis team will be part of the crew to receive the spacecraft in Utah and immediately transfer it to JSC.

That's when "the real fun begins," said Karen McNamara, the NASA project manager who oversees JSC's participation in this mission.

A small team at JSC will deintegrate the payload, perform preliminary scientific assessment of the samples and begin allocating samples to the scientific community under the direction of a Headquarters-chartered committee.

Sample curation is scheduled through 2007, and allocation of those samples is expected to continue well beyond then. Some samples will even be stored in pristine condition to await future analytical testing as technology in this area advances.

However, there's much to accomplish before these events happen. "Even though the spacecraft won't return for another two years, the planning and preparation for the spacecraft arrival is, and will be, gearing up tremendously from now until it returns," McNamara said.

The JSC Team

Lockheed Martin team members working behind the scenes to prepare and maintain the research facility are Ron Bastien, Jim Holder, Terry Parker

and Lisa Vidonic. Combined, these four have more than 65 years of experience with JSC's receiving, curation and sampling laboratories. Charged with overseeing the lab renovations and maintaining the ultraclean environment, Bastien, Holder, Parker and Vidonic keep a constant watch on the room's particle counts and air filtering system.

"Maintaining a cleanroom under renovation was an extremely challenging task," said Lisa Vidonic, the Lockheed Martin facilities engineer for the team. "Replacing the raised floor could have caused irreparable contamination in the lab, which would have meant mission failure so it was taken very seriously. Every move of every team member was carefully calculated and planned in advance in order to prevent contamination."

In addition to clean air, the technicians maintain an ultrapure water system. "The water system is one of the most critical components to maintaining a cleanroom," Holder said. "Ultrapure water is a very aggressive cleaning agent used for most everything in the lab. It behaves much like acid, yet allows us to reduce personnel exposure to hazardous chemicals."

Coordinating the planning, specifications and preparation of the cleanroom has been a well-orchestrated team effort by Stansbery, McNamara, Jack Warren, Judy Allton and Carol Schwarz. The combination of their skills and expertise proved to be the perfect blend for this project.

Warren, a Lockheed Martin curation test engineer who was the first person on Earth to

open up a lunar rock box, has been with JSC since 1966. He has extensive experience working in cleanrooms. Stansbery is a specialist in space physics and was instrumental in developing the parameters for the project before it was ever approved as a Discovery Class program in 1996. Allton and Schwarz are both Lockheed Martin curation scientists. They both have been with JSC for nearly 20 years working in lunar and meteorite curation.

Certifiably Clean

The technical talents and problem-solving skills of this team lead to the creation of an unprecedented cleanroom for NASA. The Genesis laboratory recently received its ISO-4 certification and is a Class 10 cleanroom, which means it is 1,000 times cleaner than any other spacecraft assembly area throughout the Agency.

Most spacecraft are assembled in Class 10,000 rooms, which means that up to 10,000 particles of 0.5 microns in diameter are acceptable per cubic foot volume in the room. The Genesis lab has fewer than 10 particles of 0.5 microns per cubic foot volume.

Story continues on top of Page 5

To learn more about the Genesis Mission, please visit:
<http://genesismission.jpl.nasa.gov/>

Because of its long history of outstanding performance in curating Lunar, meteorite and cosmic dust samples, JSC is the designated curation center for all of NASA's existing extraterrestrial samples. The curation facilities may also maintain samples from other countries on request in the future. One example is Japan's Muses-C asteroid mission where there are plans to curate a portion of the returned sample at JSC.

"Very few people are qualified or even sufficiently committed to work in a Class 10 cleanroom," said McNamara. "It takes an inordinate amount of dedication and discipline, and the JSC team has risen to the occasion time and time again in order to make this mission a success."

"Thanks to their attention to detail and passion for perfection, this lab is likely to be one of the most organically clean facilities of its kind in existence today."



NASA JSC 2002e24035 By Robert Markowitz

At top is a rendering of the Genesis spacecraft. Pictured below the spacecraft, the JSC Genesis Mission Team displays an array of solar wind collectors. Kneeling are (from left to right) Jerome Hittle, intern and Ron Bastien, Lockheed Martin Electro-mechanical Technician. Standing: Jim Holder, Lockheed Martin Curation Test Engineer; Karen McNamara, NASA Project Manager; Eileen Stansbery, NASA JSC Team Lead; Carol Schwarz, Lockheed Martin Curation Scientist; Lisa Vidonic, Lockheed Martin Facilities Engineer and Terry Parker, Lockheed Martin Electro-mechanical Technician. Not pictured: Judith Allton, Lockheed Martin Curation Scientist and Jack Warren, Lockheed Martin Curation Test Engineer.

A CLOSER LOOK

Hygiene requirements and entry rules for the Genesis Laboratory

People are the greatest source of contamination in any cleanroom because they shed particles from their clothes, skin, hair and even their breath.

This is why there are stringent hygiene requirements and entry rules to which all Genesis Team members are committed. In addition to extensive cleanroom training, the team observes and lives by a daily hygiene regimen in order to work in the laboratory.

McNamara explained that it is important to eliminate organic volatiles and residues because they can create an invisible film on the lab equipment and materials, which could ultimately ruin experimental results.

Genesis Team Members must:

- Be non-smokers – any smoke residue on the body, breath or clothing can contaminate a cleanroom.
- Bathe and wash hair daily, but use no gels, mousse or scented products. Scented or oily personal care products contain excessive organics.
- Remove, prior to entry, cosmetics, including (but not limited to) hair sprays, mousses and gels; mascara, blushes, powders and foundation; nail polish; scented hand and body lotions; after shave, cologne and perfume; foot and medicated powders; medicated salves and analgesic creams. Though unscented moisturizers may be used to minimize dry skin, they should not be applied directly before entry to the laboratory.
- Prior to entry, drink at least 2 oz. of chilled water, which is provided outside of the laboratory. This helps to reduce the amount of organic particles in the breath.
- Suit-up according to cleanroom standards. This could range from a comprehensive cleanroom suit to a Dryden suit with a filtered breathing apparatus.

Other items forbidden in the Genesis Laboratory area include food, drink, gum, tobacco, smoke, cosmetics, fur, cardboard or any fibrous material, glue, flammables, jewelry, briefcases, purses, jackets or sweaters.



NASA JSC 2002e24038 By Robert Markowitz

Photo disclaimer: The above photo and the cover photo were not taken under normal operating conditions since the lab was not completed and certified at the time.

Lonasee serves as role model to Native American students



Recently, Shawn Lonasee shared his successes at the Navajo Preparatory School's career fair. Being a Native American himself, Lonasee stood out at the Farmington, N.M., school event.

"I think I did turn a couple of heads with my presence there," he said. "They saw that a Native American could actually be part of a business that I am in."

Two years ago, Lonasee was hired by the NASA Johnson Space Center White Sands Test Facility (WSTF) in Las Cruces, N.M., as a mechanical engineer employed by Honeywell Technology Solutions. He works on special projects in the WSTF Propulsion Department, where he is

currently engaged in storage life testing on the U. S. Air Force's Minuteman propulsion system.

In addition to Lonasee, other residents of the Zuni Pueblo, including other WSTF employees and students from New Mexico State University (NMSU), also attended the job fair.

"I always was interested in taking things apart, especially anything with moving parts," Lonasee said. "So, I wanted to talk to students about pursuing their own interests. I think it's important that students decide what they want to do by middle school."

To spark that interest, Lonasee spoke at three different sessions. He talked about math courses and engineering degrees. He also showed a WSTF promotional video and answered the students' questions.

"Yes, it's worth it!" he told students. "It's worth all the hard work of going to school. Attend summer programs offered by the schools. Don't be stuck at home. Get used to the idea of leaving home, so you don't feel that you can't make it and are forced to come back."

But Lonasee does want to return to the Zuni Pueblo someday – voluntarily – so he can use the knowledge and skills he has acquired to benefit his Native American community.

"It was hard going to college. I joined the American Indian Program at NMSU. I had to adjust to being alone and did that by associating with people who were in the same position as I," he said. "I started to work with others in this support program. I would make copies, phone calls and arrange for tutoring, mentoring, or computer counseling for them. I also worked as an intramural activities coordinator for two-and-a-half years."

Lonasee stressed to the students that it is essential to plan for the future. "I wanted to tell the students to take advantage of the summer programs and see everything out there before they head off to college without knowing what they want to be," he said.

If they don't plan, the future might not be so bright. "It's a struggle. I've seen friends and relatives dead-ended after high school with no vision, goals or plans for further education," he said. "I was determined that I wouldn't go that route. I wanted to be a real benefit to my family."

Lonasee wishes to continue to mentor his community. Recently, he called his fifth grade teacher, Cecilia Einfalt, about establishing a career day where parents are invited too. Lonasee believes the career fair has great potential for parents to envision opportunities for their children. This will, in turn, bring the opportunities and experiences back to the community to benefit all.

Lonasee believes family support is a key to success. "Parental support was a very positive thing for me," he said, "and I want to foster better trust between parents, teachers and kids." ❖

Searching for the Middle Place

A CLOSER LOOK

When Shawn Lonasee visited the Navajo Preparatory School, his talk wasn't strictly about his work at WSTF. He also told of his roots.

"My home is two hours west of Albuquerque, 30 miles south of Gallup, near the Arizona border in the Zuni Pueblo," he said.

Lonasee explained to the student his pueblo's origin. "Once upon a time a big flood occurred in our pueblo, and a sea serpent appeared. He demanded sacrifices. Food was offered to the serpent, but he demanded human sacrifices," he said. "A small boy and girl were sacrificed. They walked into the water and drowned, but when the water receded, their images were found as if recreated in stone. Our pueblo was built in the shadow of this beautiful stone formation."

Lonasee then told the students how his ancestors came to establish the Zuni Pueblo. "We originated in the Grand Canyon, but our people were always walking and searching for what they called the Middle Place," he said. "The people were offered two eggs to decide where the Middle Place was. A beautiful egg and a plain, rather drab, egg were offered to us. Our people became divided, with some choosing the beautiful egg and others the plain one."

He then told the students what happened to the two groups. "Those that chose the colorful egg moved south. Today, we believe that they reside in the rain forests of South America. Their symbol became the colorful parrot," he said. "Those that chose the drab egg remained in the area and founded the Zuni Pueblo. The drab egg hatched into a Raven, which is a Zuni symbol of intelligence. We stayed in the area. We found our Middle Place."

Today, most members of the Zuni Pueblo make their living as silversmiths, artists, potters or as ceremonial weavers. The 10,000 inhabitants of the pueblo are centralized in a 3-square-mile valley, created by mesas and forested mountains.

Boot Camp-NASA Style

Story by Beth Nischik

Photos by James Blair

It's early in the morning on the Gilruth Center's soccer field. A small group has gathered there in the dark. They're waiting to sweat during the Gilruth's unique physical fitness class.

The idea behind the class is simple: Provide a complete workout encompassing all parts of the body. Yet the workout is anything but simple. The class is run boot-camp style, complete with several miles of running, as well as push-ups, sit-ups and jumping jacks. And that's all within the first 30 minutes of class.

Shannon Gaspard, an astronaut strength conditioning rehab specialist at Johnson Space Center, started the class this past spring. It was so popular a second class was offered this summer. Both classes met for six weeks. Participants showed up twice a week at 5:45 a.m. to give it their all.

The idea for this type of class came from an already established astronaut course in which every new astronaut class goes through a "boot camp," working out every day for two weeks. The class for the astronauts involves not only calisthenics but also the opportunity to work together as a team.

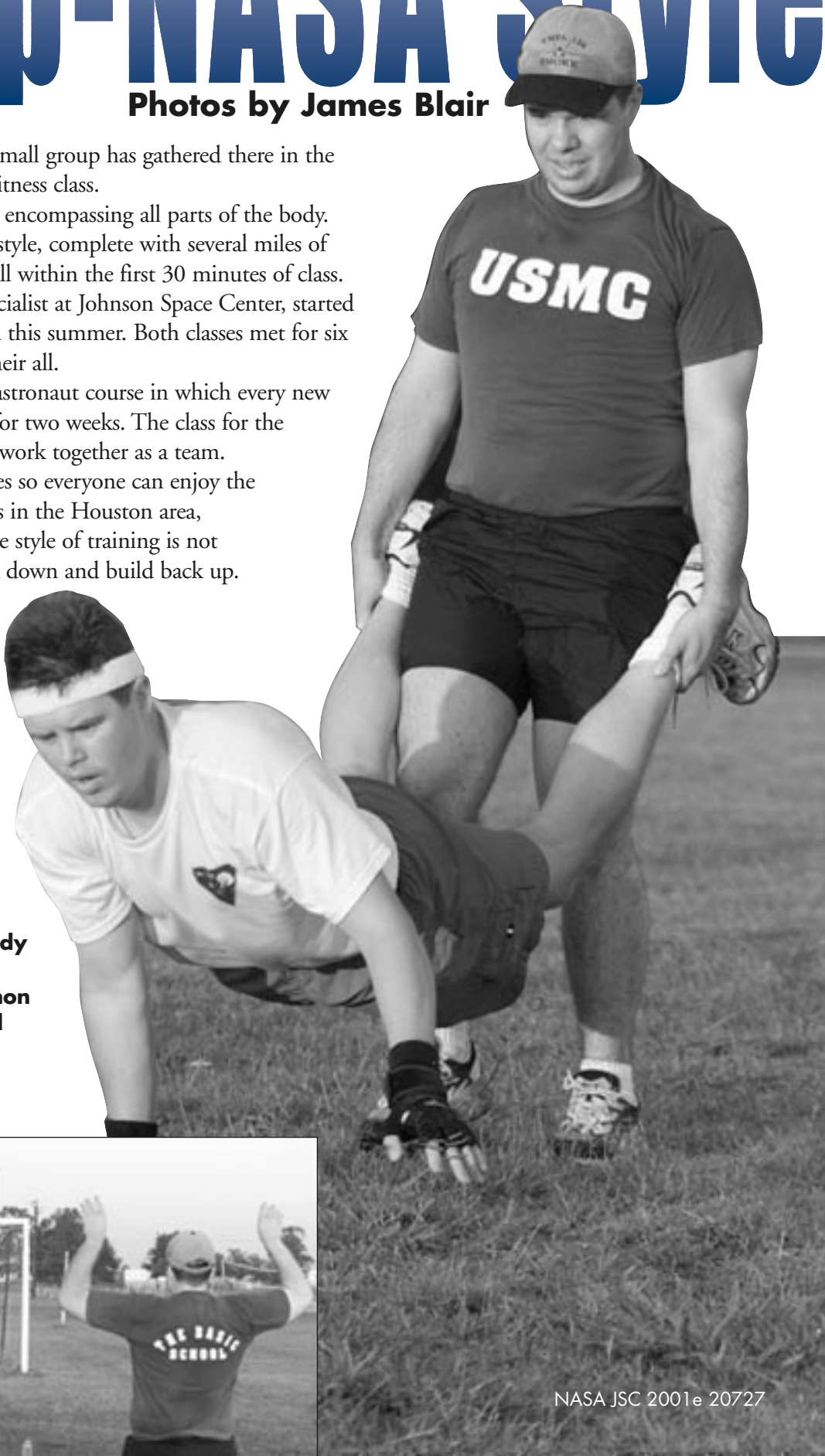
Gaspard wanted to make a boot camp available to JSC employees so everyone can enjoy the benefits. While the class competes with other military-style workouts in the Houston area, Gaspard is proud that the JSC program is different than others. "The style of training is not your military style torment," Gaspard said. "There's nothing to break down and build back up. This class is for fitness and health."

While there are team punishments, there are also team incentives. "During my workouts," she said, "I like to be encouraging but not degrading."

A third class will be offered in the fall. All participants are required to pass a medical examination or have a doctor's approval. Gaspard does not recommend this class for people who have problems running because it is a core element of the class.

For additional information on this and other exercise classes being offered, call the Gilruth at x33345. ♦

The Gilruth Center's newest class is not for the weak of body or mind. At right, Ray Scarborough assists Ed Robertson during the wheel barrow exercise. Below, instructor Shannon Gaspard leads jumping jacks. In the bottom photo, Krystal Haddock fights to complete an arm and leg lift exercise.



Profiles

By Brian Gonzalez



Robert Shelton

In April, Robert Shelton received the Employee of the Year Gold Award from the National Business and Disability Council.

The award recognizes personal achievements for recipients and makes corporations more aware that enhancing opportunities for people with disabilities makes good business sense, according to the council's award information.

However, this award means much more to Shelton, who serves as Learning Technologies Regional Center Project Manager. He thinks of it as cumulative recognition for his efforts, more like a lifetime achievement award.

"In periods in your life, you do a lot of work that is not recognized," Shelton said, adding that this award makes up for those times.

Shelton initially worked at JSC as a Co-op student in the Math/Physics Branch in the summers of 1971, 1972 and 1974. After completing his doctorate, Shelton was a professor at the University of Tennessee and Michigan Technological University. In 1987, he returned to JSC and has been here ever since. "Coming back here was like going back to graduate school," Shelton said. "I learned so much."

Born with congenital glaucoma, a condition involving increased pressure in the eye, Shelton experienced a dramatic change in his life around the time he turned 11. He lost the majority of his vision when a surgery to alleviate his condition went poorly.

Throughout elementary school, Shelton did not enjoy school. He found much of the work to be mundane. When he returned to school after losing his vision, however, he entered an entirely different world. An accommodating school administration made arrangements for Shelton to do more verbal work to facilitate learning with diminished sight.

This new way of working continued throughout high school and Shelton's career at Rice University, where he earned a bachelor's degree, master's degree and doctorate in mathematics. Throughout the years, JSC has been proactive in providing Shelton the support he needs to do his job. Even before screen readers and other assistive technology were implemented at NASA, the Center readily accommodated Shelton, even if it meant having someone read documents to him.

"NASA pioneered innovative ways to have disabled people contribute," Shelton said. "The agency was way out in front of Section 508."

Section 508 of the Federal Rehabilitation Act requires federal agencies to ensure that government electronic and information technology is accessible to employees and members of the public with disabilities.

Soon after additions and changes to Section 508 were implemented, Shelton was selected to assist in JSC's Section 508 compliance efforts. He serves as a representative to the NASA Section 508 Implementation Team. JSC was already doing what was necessary to provide accessibility, Shelton said. Section 508 just formalized the process. "In some way, it affects the way we all do business," Shelton said of Section 508.

Currently, Shelton works with his team to develop interactive learning tools for students and teachers. These programs are available online at prime.jsc.nasa.gov. "I took the education project on as an extra effort," Shelton said. "It gradually grew to consume all of my time."

His team's latest project, ROVER Ranch, is an online simulation designed to give students insight into robotic engineering. Another project, Qwhiz, allows students to explore an online game-show type environment that quizzes them about various subjects. Qwhiz also gives teachers the ability to make up new Qwhiz games with the online system.

"In his work for learning technologies, Bob has been able to get people with very different backgrounds to both work together and use their individual strengths to accomplish some pretty impressive tasks," said Chris Culbert, Shelton's former supervisor and current chief of the Robotic Systems Technology Branch.



Debra Johnson

During her 29-year career at JSC, Debra Johnson's strong work ethic has transformed the former cooperative education student into the Office of Procurement's Deputy Director.

"It goes without saying that hard work is a part of any successful career," she said. "Turning challenges into opportunities to become an expert in that area is what has made my career stand out."

Johnson came to JSC in 1973 as a business administration Co-op from Texas Southern University. Over the years, she worked her way up through the ranks of the Procurement Office. "The Center has really afforded me the opportunity for growth," she said.

Now, her hard work has paid off once more. On July 19, Johnson will receive the award for Corporate Responsibility at the Women of Color Government and Defense Technology Awards Conference in Washington, D.C.

The Corporate Responsibility Award recognizes a person working in government or defense who sparks commitments by an organization to support new opportunities for women and minorities in science and technology, according to application materials.

"I try to let people know that NASA is available for everybody," Johnson said. "It is an open society."

Johnson works with small and disadvantaged businesses through her role as the Center's Small Business Advisor and Small Disadvantaged Business Programs Lead.

"She has devoted herself unselfishly to be a guide and counselor to our organization," said Rhonda Cummings, vice president of Beststaff Technical Services.

Johnson believes mentorship is an important aspect of career development. "I've had different mentors at different levels," she said.

Mentoring is not just an activity for Johnson; it is a way of living. "My experiences are not my own but are there to share," Johnson said.

As she has climbed her way up the organizational ladder, Johnson has shared her experience with others to help them navigate the path to success.

Her advice is simple but important: "Find a mentor as soon as you can in your career and don't be afraid to seek different mentors as your career rises," Johnson said. "Some of the most influential people that I have met have not been directly in my career path."

She is a member of many committees and professional organizations, and she still finds opportunities to network through informal meetings, such as barbecues or sports.

Johnson is the JSC Acquisition Ombudsman, and she is a George M. Low Award evaluator. She also serves on the Traffic Appeals Board, the Exchange Council Scholarship Committee and the NASA Education Development Panel.

Johnson works to help others outside the JSC gates too. She serves as president of the Jack & Jill of America Greater Channel Chapter. Jack & Jill is an organization of mothers who seek to provide constructive educational, cultural, civic, recreational, social and service programs for children.

By reaching out to children in the inner city through church and organizations like Jack & Jill, Johnson exposes women and minorities to the opportunities available to them at NASA.

JSC is a place Johnson believes in and, after nearly 30 years of service, she still enjoys coming to work every day.

"I love working for NASA," Johnson said. "It is a thrill to be here."

SPACE CENTER Roundup

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